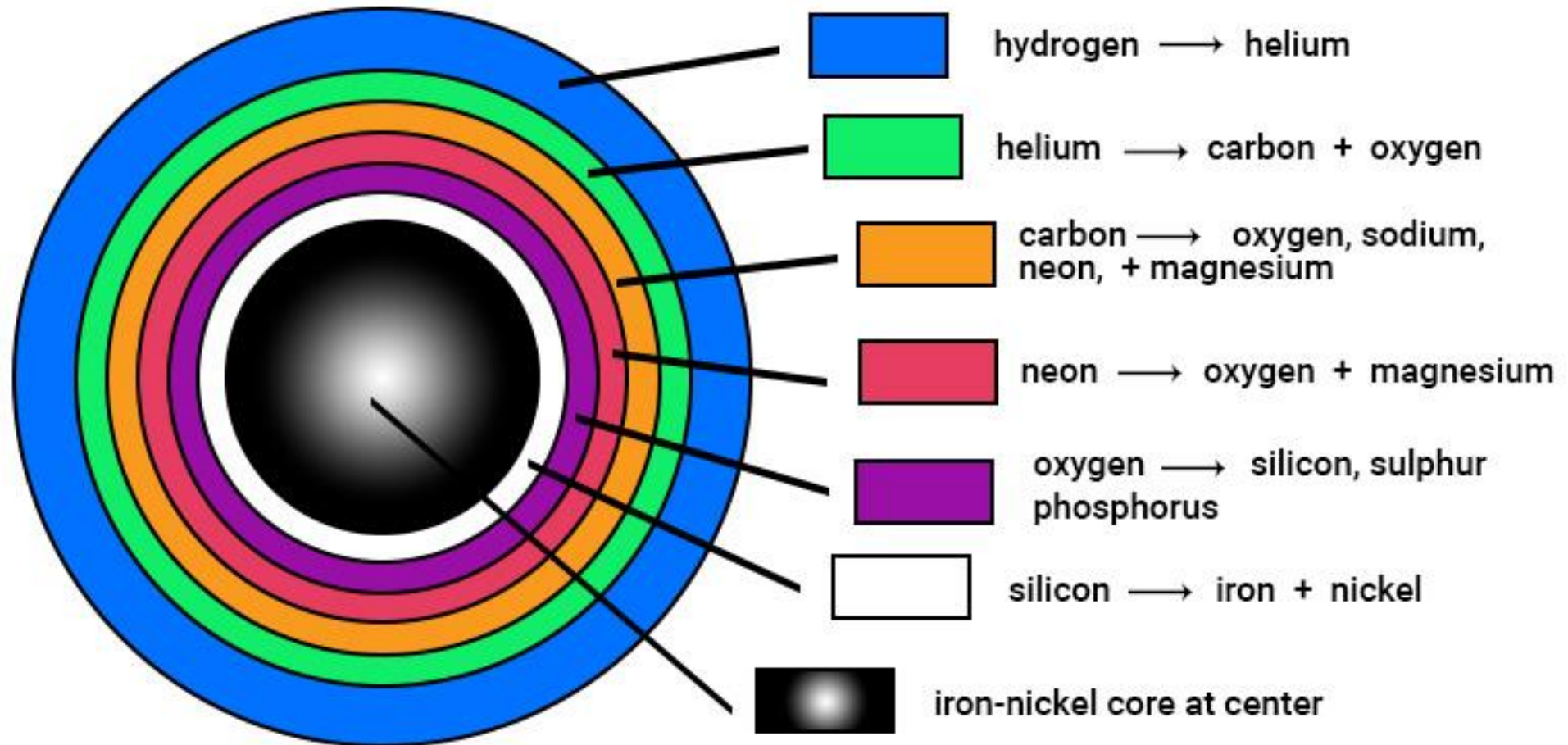


Calcium

The first element with six isotopes

Isotopes of calcium					V · E
Main isotopes ^[7]			Decay		
	abun- dance	half-life ($t_{1/2}$)	mode	pro- duct	
⁴⁰ Ca	96.9%	stable			
⁴¹ Ca	trace	9.94×10^4 y	ϵ	⁴¹ K	
⁴² Ca	0.647%	stable			
⁴³ Ca	0.135%	stable			
⁴⁴ Ca	2.09%	stable			
⁴⁵ Ca	synth	163 d	β^-	⁴⁵ Sc	
⁴⁶ Ca	0.004%	stable			
⁴⁷ Ca	synth	4.5 d	β^-	⁴⁷ Sc	
⁴⁸ Ca	0.187%	6.4×10^{19} y	$\beta^-\beta^-$	⁴⁸ Ti	

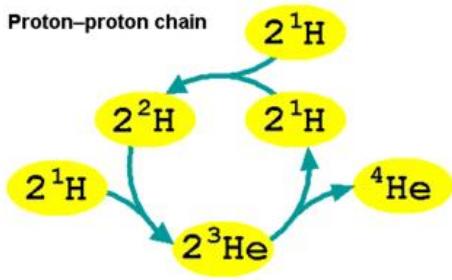
Calcium



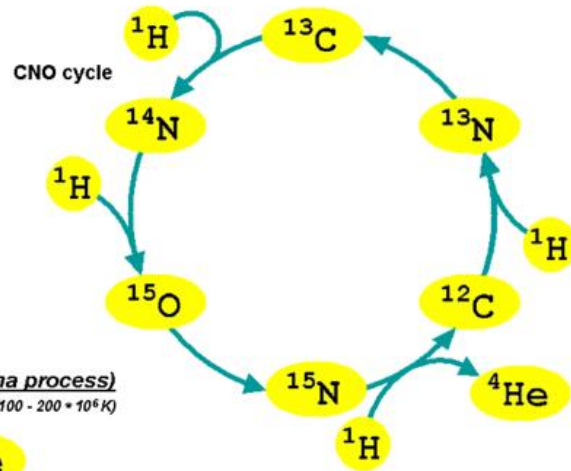
Hydrogen-burning

(15 - 60 × 10⁶ K)

Proton-proton chain

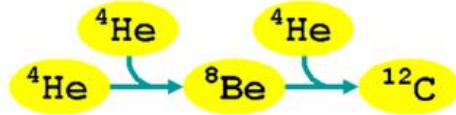


CNO cycle

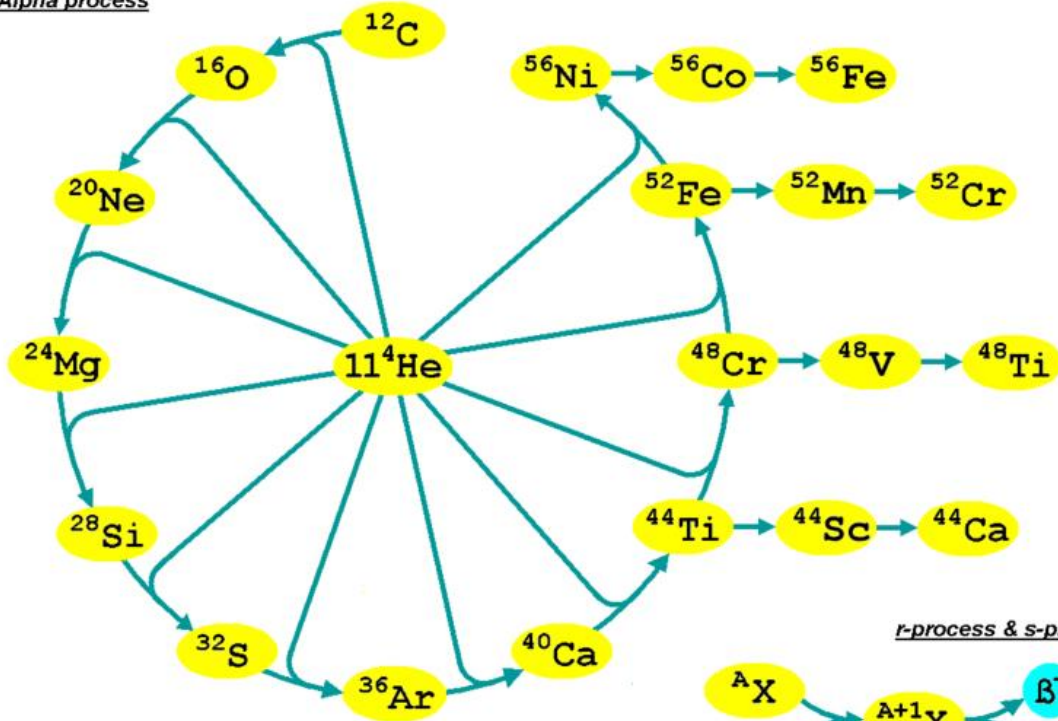


Helium-burning (triple-alpha process)

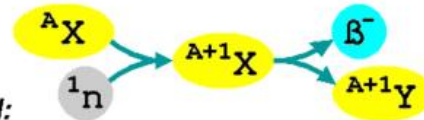
(100 - 200 × 10⁶ K)



Alpha process



r-process & s-process



Beyond iron and nickel:

Pure α process element